

ACL REVISION Reconstruction: Autograft
Rehab Protocol

	Weight Bearing	ROM	Brace	Therapeutic Elements
Phase I				
0-1wk	WBAT w/ Crutches	*FOCUS ON FULL EXTENSION !	Locked in full extension for ambulation and sleep	Swelling control. Modalities as needed. Quad Sets and prone hangs & extension board. Heel slides, hamstring sets, patella mobilization.
1-4wk	WBAT, down to 1 crutch once brace is able to be unlocked	Progress flexion as tolerated. Goal 120 by 4-6wk, but do not force especially 0- 2wk	Unlock for ambulation when >90 flexion and easily performs repetitive SLR without lag- locked in extension for sleep	Start BFR. SLR with brace locked in extension until no extension lag, then unlock brace for SLR.
4-6wk	D/C crutches when >/= 0° knee extension & 90° knee flexion, can easily perform repetitive SLR without lag, minimal effusion, and can ambulate without a limp	MAINTAIN FULL EXTENSION !	Same as Above	Stationary Bike, Weight bearing gastroc / soleus stretches, begin toe raises, closed chain extension, Double Leg Mini squats to 60°, balancing exercises, hamstring curls. Continue BFR. Core Strengthening.
Phase II	FWB	Full ROM MAINTAIN FULL EXTENSION !	Discontinue when walking with no limp and appropriate quad control	Advance closed chain strengthening: Leg press, step ups, step downs, RDLs, lunges, Bulgarian squats, wall sits Advance hip abduction & glut strength: band walks, lateral lunge, reverse lunge. Proprioceptive training. Stationary bicycle for fitness. Core Strength. Elliptical at 8-10wk
Phase III	FWB	FULL	None	Continue to advance strengthening. Can begin underwater treadmill if available, focus on form
Phase IV	FWB	FULL	Fitting for custom ACL brace	Can begin straight ahead running progression <u>**when meets criteria on page 2**</u> Increase flexibility, Core Strength, Conditioning, Forward backwards running
Phase V	FWB	FULL	Custom ACL brace	<u>**Can begin Agility when meets criteria on page 2**</u> Sports specific training, cutting, Sportsmetrics (plyometrics) jump and landing advanced strengthening program in brace. Progress Strength Training Objective (LEAP) testing done around 10-11 months for baseline and re-test monthly to determine readiness. To Pass need >or=95%. Anticipated full return to sport 11-12 months. <u>Begin return to sport progression outlined on page 2 after passing LEAP TEST</u>

***CRITERIA TO BEGIN STRAIGHT LINE JOGGING AT 16 WEEKS:**

- PAIN LESS THAN 3 / 10 (WORST)
- WITHIN 2° NORMAL KNEE EXTENSION & 120° KNEE FLEXION
- QUADRICEPS & HAMSTRING STRENGTH > 60% NORMAL
- LESS THAN 4cm DEFICIT ON SINGLE-LEG SQUAT (ANTERIOR REACH)
- AT LEAST 1 MINUTE OF SINGLE LEG SQUATS
- DOCTOR APPROVAL

Jogging Progression:

- Running prep exercises: focus on the deceleration phase such as DL speed squats, DL drop squats, DL “bounce bounce bounce squat”, then progress to alternating SL drop squats.
- Initiate jogging and progress to in-line running: Begin on treadmill with 2- 3 days per week. Begin with 1:1 or 2:1 walk to jog ratios, (ie. 1 min walk to 1 min jog or 2 min walk to 1 min jog). Then progress each week by 1 min jog until 12-15 min of jogging is achieved.

***CRITERIA TO BEGIN AGILITY WORK IN PHASE V:**

- PAIN LESS THAN 2 / 10 (WORST)
- QUAD & HAM STRENGTH > 80% NORMAL; > 50% H/Q RATIO FOR FEMALES
- AT LEAST 3 MINUTES OF SINGLE LEG SQUATS
- JOGGING >15 MINUTES ON TREADMILL
- DOCTOR APPROVAL

Agility: (NO single leg Plyo's until at least POW 20)

- Ladder drills, footwork agility drills, cone drills
- Double leg plyos: jump rope, line jumps, cone jumps, depth jumps, box jumps
- High intensity predictable patterned movements, incorporate sport specific drills

****CRITERIA TO RETURN TO PLAY AFTER PHASE V:**

- PAIN LESS THAN 2 / 10 (WORST)
- QUAD & HAM STRENGTH > 90% NORMAL; > 60% H/Q RATIO FOR FEMALES
- 95% ON LEAP TESTING
- DOCTOR APPROVAL
- After above clearance, the Return to play progression is as follows:
 - 1) Return to non-contact practice/individual drills
 - 2) Return to contact practice
 - 3) Return to scrimmage
 - 4) Return to interval play
 - 5) Return to full play